

LISTING OF CLAIMS:

1. (Currently Amended) A playback apparatus that performs title playback and application execution with a recording medium loaded therein, the recording medium having recorded thereon an index table, a plurality of operation mode objects, a plurality of playlists playlist, and a plurality of applications, wherein

each of the applications is a Java language program in which a life cycle is managed for each title,

each of the plurality of playlists playlist is a unit of playback specified by a digital stream and path information that specifies a playback path of the digital stream,

the index table shows a correspondence between a plurality of titles that are selectable on the recording medium and the plurality of operation mode objects,

each of the plurality of operation mode objects specifies a control procedure in a second mode that is second of two modes, a first mode being a mode in which the playback apparatus operates on a command base, the second mode being a mode in which the playback apparatus operates on an application base, and includes (i) an application management table showing an application whose life cycle is a title corresponding to each of the plurality of operation mode objects and (ii) a playlist table showing a playlist to be played back, the playback apparatus comprising:

a playback control engine unit operable to play back the playlists playlist;

a module manager operable to select a title from among the titles that are shown in the index table;

a virtual machine unit operable to execute the applications; and

an output unit operable to output playback images of the playlists playlist to a display

apparatus, and, when graphics are rendered by the applications, overlay the rendered graphics on the playback images to obtain overlaid images and output the overlaid images to the display apparatus, wherein

when the module manager has selected the title, the virtual machine unit starts executing an application whose life cycle is the selected title, [[and]]

when the module manager has selected the title, the playback control engine unit starts, without waiting for instructions from the applications, playback of a playlist that is specified by a playlist table included in one of the operation mode objects shown in the index table, the one of the operation mode objects corresponding to the selected title, and

the application management table includes a run attribute of each of the applications for determining a run condition after a title switch from one of the plurality of titles to another of the plurality of titles.

2. (Currently Amended) The playback apparatus of Claim 1, wherein the playback control engine unit continues playback of the playlists playlist if the application execution by the virtual machine unit ends before the playback of the playlists playlist.

Claims 3-5 (Canceled)

6. (Currently Amended) A program embodied in a computer-readable medium that causes a computer to perform playback of a title and execution of an application with a recording medium loaded therein, the recording medium having recorded thereon an index table, a plurality of operation mode objects, a plurality of playlistsplaylist, and a plurality of applications,

wherein

each of the applications is a Java language program in which a life cycle is managed for each title,

each of the playlists playlist is a unit of playback specified by a digital stream and path information that specifies a playback path of the digital stream,

the index table shows a correspondence between a plurality of titles that are selectable on the recording medium and the plurality of operation mode objects,

each of the plurality of operation mode objects specifies a control procedure in a second mode that is second of two modes, a first mode being a mode in which the playback apparatus operates on a command base, the second mode being a mode in which the playback apparatus operates on an application base, and includes (i) an application management table showing an application whose life cycle is a title corresponding to each of the plurality of operation mode objects and (ii) a playlist table showing a playlist to be played back, wherein the program controls the computer to execute the steps of:

selecting a title from among the titles that are shown in the index table;

playing back the playlists playlist;

causing a virtual machine unit in the computer to execute the applications; and

outputting playback images of the playlists playlist to a display apparatus, and, when graphics are rendered by the applications, overlaying the rendered graphics on the playback images to obtain overlaid images and outputting the overlaid images to the display apparatus, wherein

in the application executing step, when the title has been selected, the virtual machine unit is caused to start executing an application whose life cycle is the selected title, [[and]]

in the playlist playback step, when the title has been selected in the selecting step, playback of a playlist that is specified by a playlist table included in one of the operation mode objects shown in the index table starts without waiting for instructions from the applications, the one of the operation mode objects corresponding to the selected title, and

the application management table includes a run attribute of each of the applications for determining a run condition after a title switch from one of the plurality of titles to another of the plurality of titles.

7. (Currently Amended) A playback method that causes a computer with a recording medium loaded therein to perform playback of a title and execution of an application ~~with a recording medium loaded therein~~, the recording medium having recorded thereon an index table, a plurality of operation mode objects, a plurality of playlists playlist, and a plurality of applications, wherein

each of the applications is a Java language program in which a life cycle is managed for each title,

~~each of the plurality of playlists~~ playlist is a unit of playback specified by a digital stream and path information that specifies a playback path of the digital stream,

the index table shows a correspondence between a plurality of titles that are selectable on the recording medium and the plurality of operation mode objects,

each of the plurality of operation mode objects specifies a control procedure in a second mode that is second of two modes, a first mode being a mode in which the playback apparatus operates on a command base, the second mode being a mode in which the playback apparatus operates on an application base, and includes (i) an application management table showing an

application whose life cycle is a title corresponding to each of the plurality of operation mode objects and (ii) a playlist table showing a playlist to be played back, the playback method comprises the steps of:

selecting a title from among the titles that are shown in the index table;
playing back the playlists-playlist;
causing a virtual machine unit in the computer to execute the applications; and
outputting playback images of the playlists-playlist to a display apparatus, and, when graphics are rendered by the applications, overlaying the rendered graphics on the playback images to obtain overlaid images and outputting the overlaid images to the display apparatus, wherein

in the application executing step, when the title has been selected, the virtual machine unit is caused to start executing an application whose life cycle is the selected title, [[and]]

in the playlist playback step, when the title has been selected in the selecting step, playback of a playlist that is specified by a playlist table included in one of the operation mode objects shown in the index table without waiting for instructions from the applications, the one of the operation mode objects corresponding to the selected title, and

the application management table includes a run attribute of each of the applications for determining a run condition after a title switch from one of the plurality of titles to another of the plurality of titles.

Claim 8 (Canceled)

9. (Currently Amended) The playback method of Claim 7, wherein in the playlist

playback step, playback of the ~~playlists~~playlist is continued if the application execution by the virtual machine unit ends before the playback of the ~~playlists~~playlist.

10. (Currently Amended) The program of Claim 6, wherein in the playlist playback step, playback of the ~~playlists~~playlist is continued if the application execution by the virtual machine unit ends before the playback of the ~~playlists~~playlist.